amelioration of the symptoms. Four days after, a second injection was made. Two days later, hypodermatic injections of strychnine were added, and upon the next day an injection of six drachms of blood. Improvement now commenced and continued to complete convalescence. The observations of Bertin and Filleau have shown that these injections have a bactericidal action, and are at the same time powerfully tonic. The blood is withdrawn by an aspirator-needle from the jugular vein.—*Répertoire de Thérapeutique*, 1893, No. 1, p. 24. [The point of injection, the details of technique, and the precautions observed are not stated.—R. W. W.].

The following papers are worthy of notice:

"The Technique of the Subcutaneous and Intra-venous Salt-water Infusion," by DR. VON HACKER, in *Internationale klinische Rundschau*, 1892, No. 50, S. 2025; No. 51, S. 2065; No. 52, S. 2118. A carefully prepared and very complete paper.

"The Treatment of Chloroform-syncope," by Dr. A. A. BOBROFF, *Wiener medizinische Presse*, 1892, No. 52, S. 2065. He regards as irrational: Sprinkling with cold water, alternation of hot and cold compresses, cutaneous friction, tickling the nasal mucous membrane, inhalation of ammonia, rectal application of ice, irritating clysters, bloodletting, blowing air into the mouth or throat, tracheotomy; subcutaneous injection of strychnine, ether, alcohol, ammonia, digitalis; inhalation of nitrite of amyl, acupuncture of the heart and rhythmical compression of the same by the hands. As rational remedies he recommends: Inversion of the patient, auto-transfusion of blood; subcutaneous intra-venous injection of physiological salt solution, electrization of the phrenic, and artificial respiration by the method of Sylvester.

MEDICINE.

UNDER THE CHARGE OF

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PERIPHERAL NEURITIS IN TYPHOID FEVER.

DR. JUDSON BURY, of Manchester, contributes a careful article on this subject to the *Medical Chronicle* (vol. xvi., No. 3). The writer refers in detail to the literature of the subject, and mentions several cases which have come under his observation. The evidence adduced is held to furnish abundant evidence that paralysis involving the whole or a portion of a limb sometimes occurs either during or subsequent to the pyrexial period of typhoid fever. A case of Gubler's is mentioned, in which there was paresis of the palate (nasal twang) and paralysis of accommodation. A case of George Ross's is also quoted, in which the course and distribution of the paralysis was strikingly suggestive of diphtheria, although that disease could with certainty be excluded.

The following features are usually prominent and throw much light on the situation and nature of the lesion:

"1. The paralysis is usually partial in extent and degree. It may affect the whole of both lower limbs, or one limb, either upper or lower; but, as a rule, it is limited to certain muscles or groups of muscles, and often is strictly confined to the territory of a particular nerve.

"2. The muscles are wasted as well as weak, and when tested with electricity show the partial or complete reaction of degeneration. In a few cases contractures of muscles are mentioned, but it is to be observed that they were found not in a well-nourished, more or less rigid limb, but in one where some at least of the muscles were distinctly atrophied.

"3. The paralysis is almost invariably preceded or accompanied by some form of sensory disturbance. Thus the patient suffers from intense pain, continuous, remittent, fixed, or radiating, or he complains of numbness and tingling in the extremity, which subsequently becomes paralyzed. Anæsthesia, partial or complete, is of frequent occurrence, and, like the paralysis which it usually precedes, may be limited to the territory of a particular nerve.

"4. During the course of typhoid fever, the knee-jerks, as pointed out by Angel Money, are commonly exaggerated, and there may be ankle clonus. Gowers refers to excessive knee-jerk and foot clonus in association with paraplegic weakness in patients seen some months after the fever; and in the case of the man under my own care referred to above, there was exaggeration of the knee-jerks, together with paraplegic weakness and anæsthesia. But, as a rule, judging from the reports in which the reflexes are mentioned, paralysis of the lower limbs is associated with diminution or loss of the knee-jerks."

The atrophic character of the paralysis testifies to a lesion in the lower segment of the motor tract. While probably in some of the cases the paralysis is the result of an anterior poliomyelitis, the presence of sensory disturbance in the vast majority of the cases shows that the lesion, if in the cord at all, is not limited to the anterior horns, or involves both roots or the peripheral nerves.

A consideration of the symptoms observed is strongly in favor of an affection of the peripheral nerves.

The nature of the neuritis—whether accidental or toxic—is briefly considered.

Gowers' theory of local injury—from pressure or stretching of the affected nerve at a time when its nutrition is defective—may be a potent factor in some cases, but in others, according to the writer, evidence is not wanting which tends to show that the neuritis is due to a poison conveyed by means of the blood to the affected nerves, for, even where the chief functional disabilities are limited to one nerve territory, there are frequently slight indications of a more widely distributed disorder.

In addition to the above group of paralyses there are a few observations showing that occasionally an acute paralysis of rapidly ascending course, and frequently terminating fatally, may develop during the course of or immediately after typhoid fever. On the relations of this variety with peripheral neuritis, consult Dr. Ross, *Medical Chronicle*, 1889.

"From a consideration of the preceding observations we are inclined to think that a multiple neuritis, initiated by the virus of typhoid fever, and frequently present in this disease, is not an unreasonable assumption. In one set of cases we may suppose that the action of the poison on the nerves is too slight to give rise to outward manifestations, or that these are masked by the general symptoms of the fever. In another set of cases the toxic influence on the nerves appears to be revealed by a series of irritative phenomena, such as neuralgic pains, cutaneous and muscular hyperæsthesias, exaggerated reflexes, and cramps and contractures of various muscles; while in a third group of cases the presence of an atrophic paralysis, its distribution, progress, and associations leave little doubt on the mind of the observer that he has to deal with a genuine parenchymatous neuritis, and frequently with one of wide distribution throughout the body."

ARSENIC IN CHOREA.

DR. WILLIAM MURRAY, of Newcastle, records in the *Lancet*, 1893, No. 3626, his favorable experience of the treatment of chorea with large doses of Fowler's solution.

The drug is given (to children) in fifteen- or even twenty-drop doses for a few days. This may be done without causing any disturbance of the stomach, provided the medicine be administered *during a meal.* The remedy cannot safely be administered in this fashion for more than a week. The writer states that he has only seen one case resist this treatment in the course of twenty years.

[*Note.*—I have quite recently seen an excellent result obtained in this manner in a case of chorea in a child of five years, which had resisted treatment with smaller doses of arsenic.—W. P.]

Murray also alludes to the good results obtained with large doses of arsenic in the treatment of diabetes, asthma, and atrophic emphysema of the lungs.

LACTIC FERMENTATION IN THE BLADDER.

SIR WILLIAM ROBERTS describes the case of a man of eighty-four years who had undergone lithotrity five years previously, and subsequently used the catheter. "The freshly voided urine was very turbid, intensely acid, and contained sugar. Examined under the microscope, it was found loaded with bacteria, in the form of micrococci and bacilli, resembling those which are seen in souring milk. There were also numerous torulæ, having the characteristic appearance of yeast cells. Besides these adventitious organisms there existed a good many pus corpuscles and a corresponding (small) amount of albumin. I had several subsequent opportunities of examining the urine;

on one occasion the sample was withdrawn by catheter in my room and examined in the absolutely fresh state. All the specimens presented the same essential peculiarities. They were all sharply acid and saccharine and contained myriads of bacteria and numerous yeast cells. The patient complained of none of the usual symptoms of diabetes (there was neither thirst nor diuresis); but he reported that some time ago, for a period of three weeks, he suffered from urgent thirst and an excessive flow of urine, and that sugar was then found in the urine by his medical attendant. A remarkable feature of the case, from a clinical point of view, was the maintenance of a sharply acid reaction of the urine and the absence of recurrent formation of phosphatic concretions in the bladder."

The following explanation is suggested:

"In the bladder of this patient three fermentations tending to acidity appeared to be going on concurrently. The chief of these was the lactic fermentation, and lactic acid was identified as the main cause of the intense acidity of the urine. The second was the alcoholic fermentation engendered by the yeast cells, which were always present in the patient's urine. The third was the acetic fermentation, for acetic acid was clearly demonstrated in the distillate from the urine. I failed to obtain direct proof of the presence of alcohol in the urine. The alcoholic fermentation was probably only feeble in degree, and presumably the alcohol generated was usually changed, as fast as produced, by the agency of the acetic ferment into acetic acid. The patient, however, remarked that the urine sometimes had a 'vinous smell,' so that probably the urine did sometimes contain alcohol. There is no difficulty in accounting for the introduction of the germs of these ferments into the bladder in the present case. The catheter which was daily used furnished a well-recognized means of conveyance, and the patient admitted that he was not over-careful in the observance of antiseptic precautions. Finally, it may be confidently predicted that if the patient at some future time ceased to be glycosuric and still went on using the catheter in his careless way the urine would in no long time be in the grip of the ammoniacal fermentation, and he would then stand in danger of the formation of phosphatic concretions in the bladder. His glycosuria, in fact, protects him from this untoward contingency."

The writer suggests that the lactic fermentation might be turned to therapeutic uses—for example, in cases of intractable cystitis from ammoniacal decomposition and in recurrent phosphatic formations after operations for stone. From experiments made in the laboratory, a 10 to 20 per cent. watery solution of "Bynin" (malt extract) would be a suitable one to inject, say twice or thrice daily into the emptied bladder and retained there as long as possible.—*Lancet*, 1893, No. 3626.

PULMONARY SYPHILIS.

CHOMATIONAS (*Revue Méd. de l'Armée*, May, 1892; *Journ. des Mal. Cutan. et Syph.*, 1892, No. 10, p. 563) has reported the case of a man, twenty-seven years old, who, two years after an attack of influenza complicated by bronchitis and followed by hæmoptysis, presented great debility, a Hippocratic countenance, intense dyspnœa, elevation of temperature, insomnia, anorexia, violent cough, with muco-purulent and blood-streaked expectoration, and profuse night-sweats. On physical examination no lesion was detected at the apices of the lungs, but over the middle lobes posteriorly there were evidences of consolidation and of a small cavity upon the right. The patient presented tegumentary and osseous evidences of a previous syphilitic infection, and on being interrogated admitted having had a chancre ten years previously and having had secondary and tertiary symptoms subsequently. Examination of the sputum failed to disclose the presence of tubercle bacilli. A diagnosis of pulmonary gumma was made, and a mixed treatment with inunctions of mercurial ointment and potassium iodide in increasing doses was prescribed. The patient speedily and progressively improved, symptoms and physical signs receded, and at the end of six weeks the patient was dismissed, practically cured.

In differential diagnosis the following considerations are to be borne in mind: (1) the anatomic localization of the lesions in the lungs, tuberculosis being usually situated at the apices, syphilis in the lower lobes; (2) the microscopic examination of the sputum, the tubercle bacillus being absent in cases of syphilis; (3) the history of the patient, personal and family; and (4) the results of anti-syphilitic treatment.

THE ANTITOXIC ACTIVITY OF THE BLOOD-SERUM OF CONVALESCENTS FROM CHOLERA.

LAZARUS (*Berliner klin. Wochenschrift*, 1892, Nos. 43 and 44) has made a study of the blood-serum of several cases in which recovery from cholera had taken place, with a view of determining if it possessed any properties by virtue of which it would be capable of protecting other animals from infection with cholera. He found that guinea-pigs that received intra-peritoneal injections of such serum and were subsequently treated with cultures of cholera bacilli were not infected, while control animals unprotected by preliminary treatment succumbed to cholera infection. The smallest quantity sufficient to confer protection upon the animals was 0.0001 grm., representing 1 : 3,000,000 of body-weight. If the protective serum-inoculation was made after inoculation with cholera bacilli, the result varied with the period of time that had elapsed. If the injection was practised at the same time as the inoculation, or before constitutional symptoms, as manifested by elevation of temperature, had appeared, the animal survived; otherwise death ensued. After symptoms of infection had appeared, even the largest doses were not capable of saving the animal.

AN OPERATIVE CURE OF AN ENORMOUS CYST OF THE LIVER.

BOYER (*Prager med. Wochenschr.*, Dec. 28, 1892) reports a rare case of cyst of the liver containing about ten quarts of liquid. The wall of the cyst was made up of altered hepatic substance. There was no trace of echinococcus fragments in the fluid, and no bile-salts or pigment. There was no epithelial lining of the cyst. There was no icterus present either before or after the operation. The swelling made its appearance four months previous to the operation without any subjective symptoms, with the exception of indigestion, loss of appetite, and irregularity of stools, with alternating costiveness and diarrhœa. The characteristic symptom was a marked pain in the right shoulder. The most probable explanation, to the author, was an inflammatory condition with occlusion of one of the biliary ducts. The absence of icterus and of severe digestive symptoms, with such great changes in the liver, seemed to the author to be of great interest.

A CASE OF ABSCESS OF THE CAVITY OF RITZIUS.

MARTIN (*Annales des Mal. des Organes Genito-urin.*, January, 1893), from the infrequent occurrence of these abscesses, only forty-three cases having been reported, is led to report the case of a child, sixteen months old, rhachitic, having had digestive troubles, alternating diarrhœa and constipation, having been costive and without stool for some time, and catheterized for four days previous to admission. Just above the pubes was seen a round tumor the size of an egg; it could be distinctly separated from the iliac bones on both sides. The catheterism of the bladder showed it was not the distended bladder. An incision in the median line through the skin and linea alba was followed by the escape of about 3½ ounces of pus. The finger passed down between the bladder and the abdominal parietes. The cavity was washed out with 1 : 4000 sublimate solution, drained, and an antiseptic dressing applied. The patient made a good recovery. The remarkable feature of this case was the extreme youth of the patient, this being the youngest age at which such abscesses have been known, though they are frequent in young children. In the diagnosis, tumors of the wall of the bladder, sacculated bladder, or stone in a sacculated bladder, are easily eliminated by catheterization and the use of sounds. The treatment is that of any abscess cavity.

THE VARIETIES OF THE PARASITES OF MALARIA AND THE NATURE OF MALARIAL INFECTION.

MARCHIAFAVA and BIGNAMI (*Deutsche medicin. Wochenschr.*, 1892, Nos. 51 and 52) record the results of a study of the parasitology of malarial fever. They come to the conclusion that malaria is an infectious disease caused by a hæmatozoön that does not belong to the order of schizomycetes, but to the protozoa (Laveran). The hæmatozoa appear as amœbæ, which develop within and at the expense of the red corpuscles, converting the hæmoglobin into melanin or rapidly causing a toxic necrosis, whence results anæmia. The amœbæ complete within the red corpuscles a cycle of existence that begins with the motile unpigmented forms (which in the process of development become pigmented) and terminates with the segmentation forms representing the multiplication of the organisms. The newly formed spores give rise to other amœbæ that, in their turn, also invade the red corpuscles. This cycle of life is regularly repeated coincidentally with the periodic recurrence of the paroxysms. Sporulation or segmentation is coincident with the beginning of a paroxysm (Golgi). During this cycle of existence the amœbæ probably give rise to the development of toxic substances, of the existence of which, however, direct evidence is as yet wanting. The evidence leads to the inference that in the act of reproduction the amœbæ produce a pyrogenic toxine; during their endoglobular development, in the course of fevers of severe grade, they produce toxic substances that possess the property of causing necrosis of the red corpuscles, of separating the hæmoglobin from the protoplasm, and of inducing changes in internal organs. The morphological and biological peculiarities of the parasites differ among the various types or species of fever; whence the existence of several varieties or species of parasites seems reasonable. The differences in the biological and pathogenic peculiarities of the parasites justify the assumption of various types or species of fever. The most recent investigations lead to the acceptance of the following varieties: The amœba of quartan fever (Golgi); the amœba of tertian fever (Golgi); the aœmba of summer-autumn tertian; and the amœba of quotidian. The pernicious types of fever are caused only by the last two, and the character of the attack is explicable by the biology of the parasites. The practical outcome of this knowledge is that it thus becomes possible to differentiate at once those cases that may prove pernicious from those that never do. The amœbæ of malaria occasion not only acute alterations of the blood, leading to hypoglobulia, but also changes in the vascular system of all and of the parenchyma of some viscera (spleen, liver, medulla of bone). These anatomico-pathological changes are in some organs but transitory, and largely explain the symptoms attendant upon the acute infection. In other organs (spleen, liver, medulla of bone) the changes are of a more permanent character and suffice to explain the anæmia, the symptoms of chronic infection, and the cachexia.

TWO CASES OF DIABETES ASSOCIATED WITH ATROPHY OF THE PANCREAS.

FREYHAN (*Berliner klin. Wochenschr.*, xxx. 6, p. 129) has reported from the service of Fürbringer at the Hospital on the Friedrichshain, two cases of diabetes, in both of which, after death, the pancreas was found disorganized in consequence of the presence of calculi in the pancreatic duct. In one case which occurred in a man, thirty-five years old, for half a year there had been occasional pains in the chest, slight cough, general malaise, and loss of strength and flesh. For two weeks there had been increased frequency of micturition. On physical examination the signs of infiltration of the apices of both lungs were found; the sputa contained tubercle bacilli. About two quarts of urine were passed in the twenty-four hours. The secretion had a specific gravity of 1024 and contained three and one-half per cent. of sugar. A careful regulation of the diet was followed by slight improvement, but the course of the case was steadily downward and death took place five weeks after admission to hospital. In addition to the lesions of tuberculosis in the lungs, the pancreas was found atrophied and replaced by a mass of fat. In the axis of the organ could be seen the pancreatic duct, dilated and varicose, literally stuffed with large and small calculi and fine sand.

The second case occurred in a woman who had been ill for four years, and had become reduced in weight to sixty-six pounds. There had been weakness, malaise, and a sense of drawing of the extremities, followed by sharp pains referred to the sacrum and to the extremities. Thirst and hunger became excessive, and the quantity of urine greatly increased. Later, the appetite failed and emaciation became pronounced. Two quarts of urine of a specific gravity of 1050, containing a trace of albumin and eight per cent. of sugar, were passed in the twenty-four hours. In the course of the disease infiltration of the apex of the right lung took place. The quantity of urine became smaller, while the proportion of albumin increased aud the proportion of sugar decreased. After death, in addition to the tuberculous changes in the lung and amyloid changes in the spleen and kidney, it was found that the pancreas was replaced by a mass of fat and fibrous tissue, a few lobules of normal parenchyma yet remaining in the head of the organ. The pancreatic duct was dilated, and contained sand-like material, while near the tail was a large calculus, the outer layer of which was constituted of organic substances, particularly cholesterin, and the inner layer of calcium carbonate.

BROWN-SÉQUARD'S PARALYSIS AFTER INFLUENZA.

EULENBERG (*Deutsche medicin. Wochenschr.*, No. 38, 1892, p. 845) has reported the case of a girl, seventen years old, previously in good health, who, following an attack of influenza, attended with considerable elevation of temperature, complained of pain in the back between the shoulders, and of a painful, burning sensation in the right shoulder and in the right arm. In the course of a couple of months, progressive heaviness and weakness were observed in the right lower extremity, which was dragged somewhat in walking. A short time later complete paralysis of the right lower extremity manifested itself, together with paralysis of the rectum and bladder, and complete anæsthesia of the entire left lower extremity. The urine had to be withdrawn by means of a catheter and the bowels moved involuntarily without the consciousness of the patient. Some slight weakness of the right upper extremity was observed, which subsequently became more pronounced. Under treatment the symptoms referable to the bladder and bowel gradually disappeared, while the power of movement in the right lower extremity slowly returned. The right pupil was smaller than the left, the right palpebral fissure was likewise the narrower, and the right side of the face and the right ear felt warmer than the left. The diagnosis of a spinal hemilesion (disease of the right half of the spinal cord) at the level of the lower cervical and upper dorsal nerve-segments was based upon the typical distribution of the palsy, with atrophy, hyperæsthesia, and increased reflexes, in the right lower extremity; the analgesia and hypæsthesia to the middle line in the left lower extremity; the extension of the sensory disturbances to the level of the second or third rib; the atrophic paresis of the right upper extremity; in the distribution of musculo-cutaneous, radial, median, and ulnar nerves with analgesia and hypæsthesia of the posterior aspect of the lower half of the arm, the ulner border of the forearm and hand, and adjacent portions of the dorsal and volar surfaces, including the little finger and the dorsal, volar, and ulnar aspects of the ring finger; and the pupillary and vasomotor thermic differences of the sides of the face. In addition to these features the case presented one other unusual phenomenon: the long extensor muscle of the great toe of the right foot displayed simultaneous faradic and franklinic reactions of degeneration—that is, direct or indirect faradic or franklinic stimulation of the muscle was followed by slow, deliberate, and prolonged tonic contraction.

DOUBLE ANEURISM OF THE AORTA.

FAURE-MILLER and COTTET (*Bull. de la Soc. Anat. de Paris*, an. lxviii, 5. sér. t. vii., f. 3, p. 75) have reported the case of a man, forty-five years old, who for two months had complained of difficulty in respiration, with frequent cough, the expectorated matters from time to time containing a little blood. The man was anæmic and debilitated. He presented no evidence of antecedent syphilis. On auscultation the respiratory murmur was found to be enfeebled, and there were signs of slight congestion, especially at the apex of the left lung, where the respiration was harsh and the percussion resonance impaired. The results of bacteriological examination of the sputum were negative. The heart was enlarged; its sounds were intensified; but there was neither duplication nor murmur to be detected. In the supra-sternal notch pulsation and slight thrill were appreciable, but there was no difference between the radial pulses. The attacks of hæmoptysis ceased after twelve days, but some four weeks later a paroxysm of marked dyspnœa occurred, with wheezing respiration and coarse, moist râles. There was also aphonia, and on laryngoscopic examination the left vocal band was seen to be paralyzed. There was complaint of a painful sense of heaviness of the left arm. Neither pupil was dilated. Potassium iodide, thirty grains daily, was administered, and some improvement followed; but three weeks later suffocation resulted from a sudden copious hemorrhage. On post-mortem examination an aneurism of the transverse portion of the arch of the aorta was found; and a second aneurism was found involving the posterior wall of the descending aorta on a level with the fifth dorsal vertebra, in which it had formed a hemispherical excavation. The first aneurism was larger than a man's fist and involved the entire superior surface of the arch of the aorta. The tumor had formed adhesions with the sternum. The ascending aorta communicated with it by a large opening, but the opening into the descending aorta was narrowed by the wall of the aneurism. The innominate, the left carotid, and the left subclavian arteries arose from the left portion of the aneurism, to which they were intimately adherent. Upon the left aspect of the aneurism ran the pneumogastric and the left recurrent laryngeal branch. The latter was intricately involved between the inferior surface of the aorta and the left bronchus. The trachea was flattened and displaced to the right. The aneurism had perforated the trachea, and through this opening the fatal hemorrhage had taken place. The aortic leaflets presented no lesion. The left lung was adherent at its base, and at the apex were found several indurated nodules.

SUBCUTANEOUS EMPHYSEMA IN A CASE OF DIPHTHERIA.

PINEAU (*Bull. de la Soc. Anat. de Paris*, an. lxviii., 5. sér. t. vii., f. 5, p. 102) has reported the case of a man, twenty years old, who presented subcutaneous emphysema of the anterior and posterior aspects of the trunk, from the level of the lower jaw to that of the umbilicus in front, and to that of the lumbar region posteriorly, and also of the upper extremities down to the wrists. There was dulness on percussion at the base of the left lung. The vesicular murmur was feeble. It was learned that two weeks previously, following contact with children who had croup, the man had complained of soreness of the throat. There was some cough, and in the expectorated matters was found false membrane. A particularly violent paroxysm was attended with intense pain in the chest, a sense of oppression, and almost total extinction of voice; and shortly afterward there developed the extensive subcutaneous emphysema. The man died sixteen hours after coming under observation. Upon post-mortem examination larynx, trachea, and bronchial tubes in both lungs were found lined with false membrane. The left pleural cavity contained a pint of serous-fibrinous exudation. The left lung was nowhere adherent. The lower lobe, however, was in a condition of red hepatization. The right lung was adherent to the chest-wall for an extent equal to a silver dollar, at a point corresponding with the supra-mammary region. Upon breaking up the adhesion a rupture of the pulmonary structure was disclosed, and it was in consequence of this that the subcutaneous emphysema had developed. From the pneumonitic area in the left lung, and from the exudate in the bronchial tubes, it was, by culture in various media, possible to demonstrate the presence of the bacilli of Loeffler. Other organisms were also found in the pneumonitic area and in the right lung.

SURGERY.

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THE TREATMENT OF GRAVE VESICAL HEMORRHAGE BY SUPRA-PUBIC CYSTOTOMY.

PONCET (*Le Mercredi Médical*, 1892, No. 48) advises supra-pubic cystotomy in certain grave hemorrhages of the bladder, which do not yield to the usual forms of treatment. He prefers to call this operation epicystotomy, on account of its seat, in the anterior wall of the bladder, and also because it is a shorter term. Hemorrhages due to renal or urethral affections, or that due to gonorrhœal cystitis, are, of course, not amenable to this treatment. The cases in which the author advises epicystotomy are hemorrhages due to prostatic disease and to tuberculous affections of the bladder.

Hemorrhage in the prostatic cases may be due either to rupture of a